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## Current condition and forecasts of ENSO and IOD for JFM 2025

Issued on 03<sup>rd</sup> January 2025 by Seasonal Forecasting Division of the Department of Meteorology, Sri Lanka.

### 1. El Nino and La Nina update

ENSO-neutral conditions are present. Equatorial sea surface temperatures (SSTs) are near-to-below-average in the central and eastern Pacific Ocean. La Niña is favored to emerge in November-January (59% chance) and is expected to persist through March-March 2025(source-CPC-NOAA). However, according to the forecast from, The BoM Australia 's model forecasts that SSTs in the central tropical Pacific will remain in the ENSO-neutral range throughout the forecast period to April 2025, despite briefly dipping below the La Niña threshold in January. This is consistent with 4 of the 6 other international climate models surveyed.

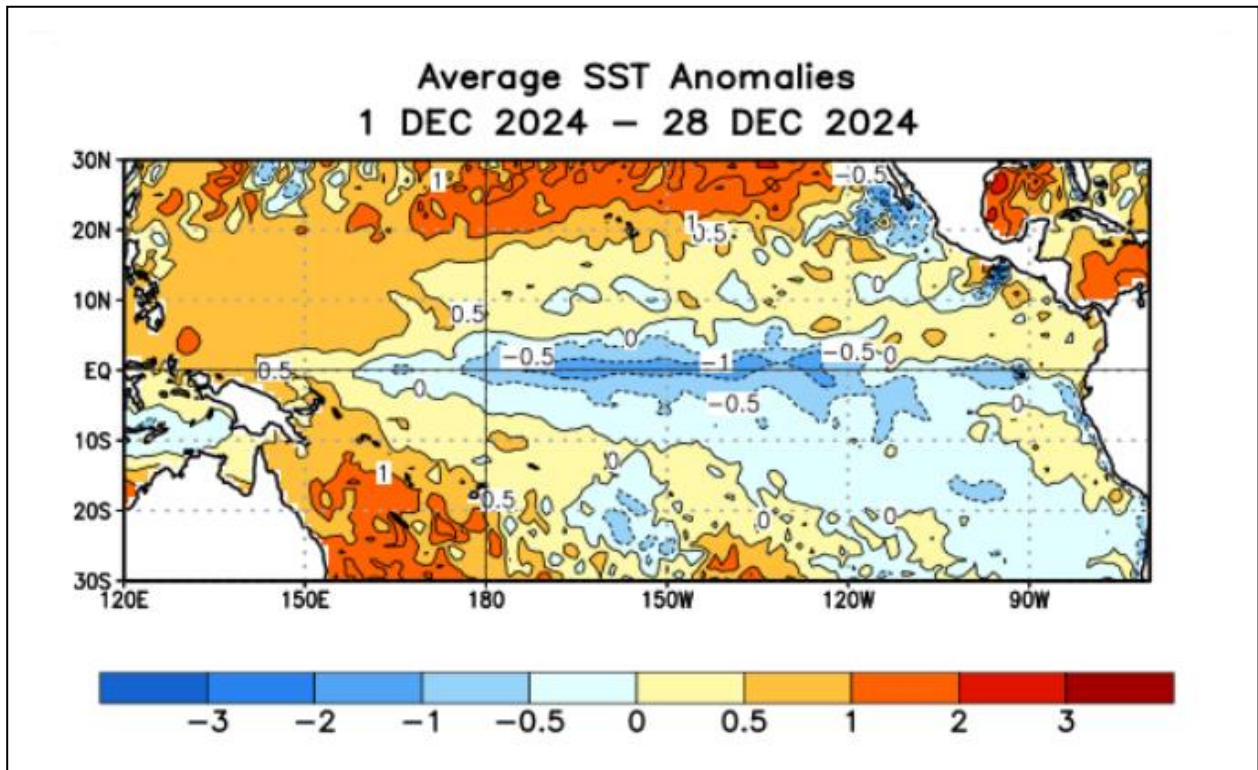


Fig 1: Observed Average Sea surface temperature (SST) anomalies (°C)

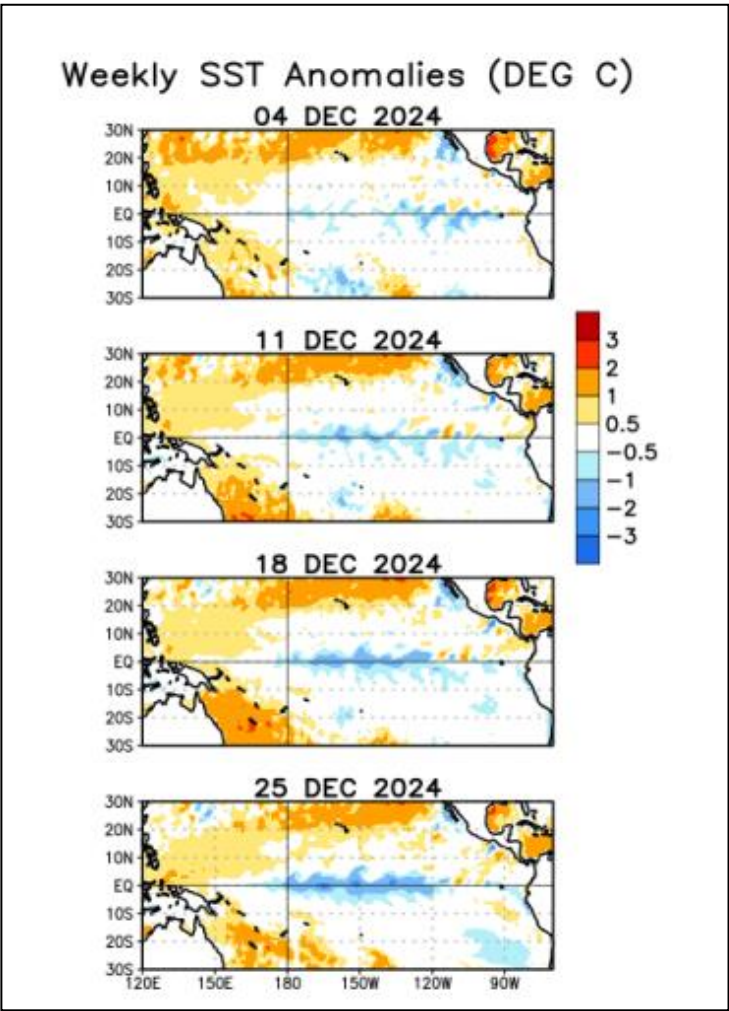


Fig 2: Weekly Observed Average Sea surface temperature (SST) anomalies (°C)

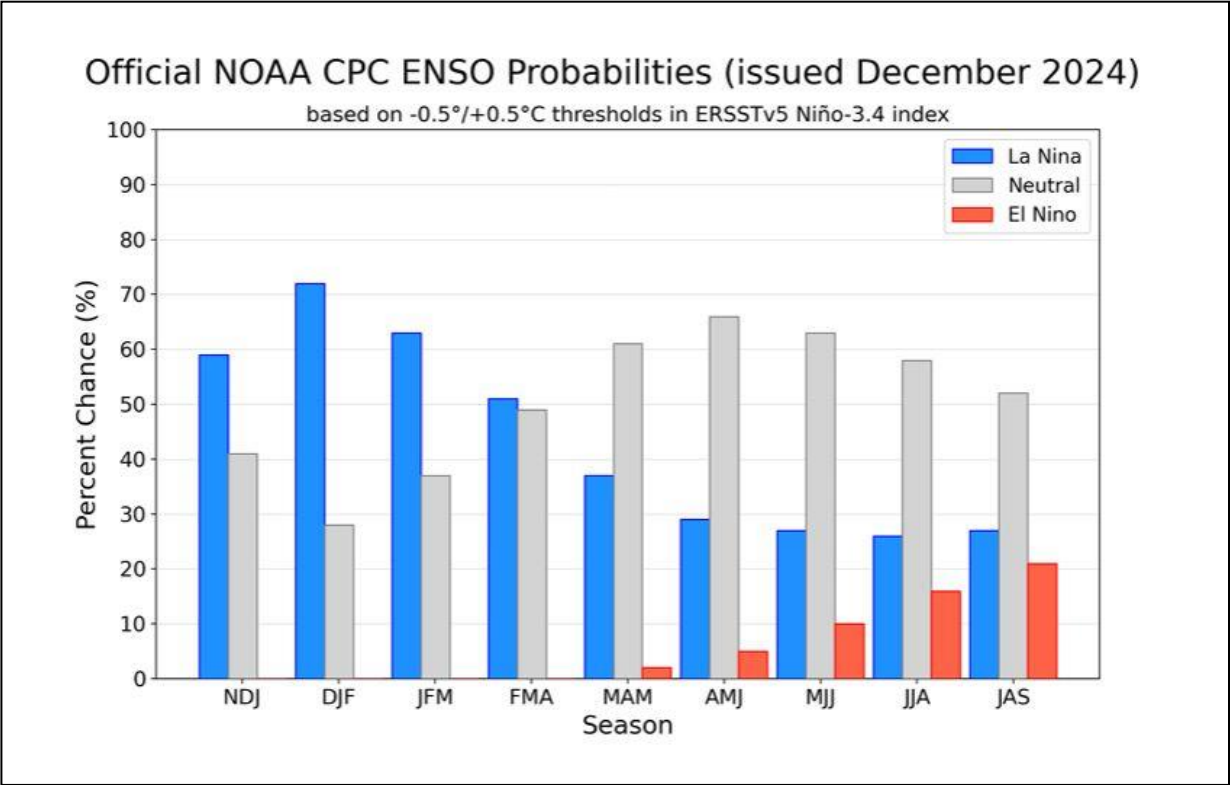


Fig 3a: ENSO forecast from Climate Prediction Center (CPC)/ IRI Forecast

### 1.1.1 Impacts of La Nina on monthly rainfall anomaly during January, February and March

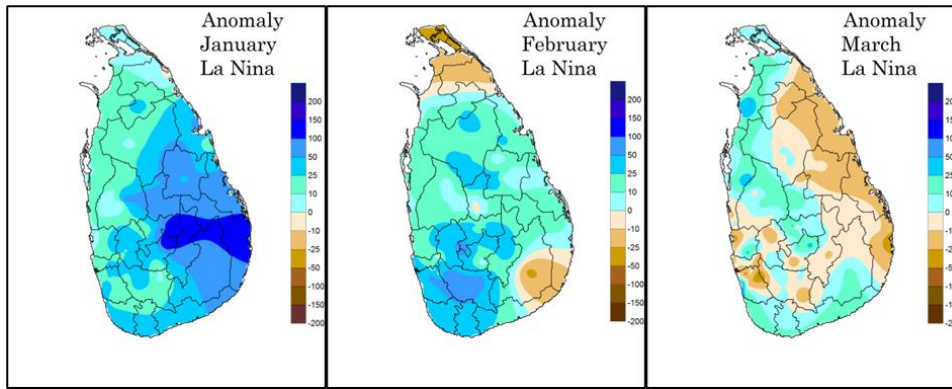


Fig 3b: Monthly Rainfall Anomaly maps of the months of January(A), February (B) and March (C) during La Nina years (Hapuarachchi et al 2016)

Research conducted by the Department of Meteorology, it has been found that, above normal rainfalls are likely all over country during the month of January. Below normal rainfalls are possible over Jaffna district and some areas in Vavuniya, Mannar Ampara, Monaragala, Mathale and Hambantota districts and above normal rainfalls are possible over remaining areas of the country during the month of February. During the month of March, below normal rainfalls are likely over some areas of Vavuniya, Trincomalee, Batticaloa, Ampara, Polonnaruwa, Rathnapura, Kegalle, Kalutara and Gampaha districts and above or near normal rainfalls possible over remaining areas of the country while the La Nina conditions were prevailed. (Fig 3b).

### 1.2 The Indian Ocean Dipole (IOD) update

The Indian Ocean Dipole (IOD) is neutral. The IOD had been tending negative from mid-October but returned to neutral values at the start of December. The Bureau of Meteorology, Australia’s model forecasts that the IOD will remain neutral throughout the forecast period to April 2025. (source- BOM, Australia).

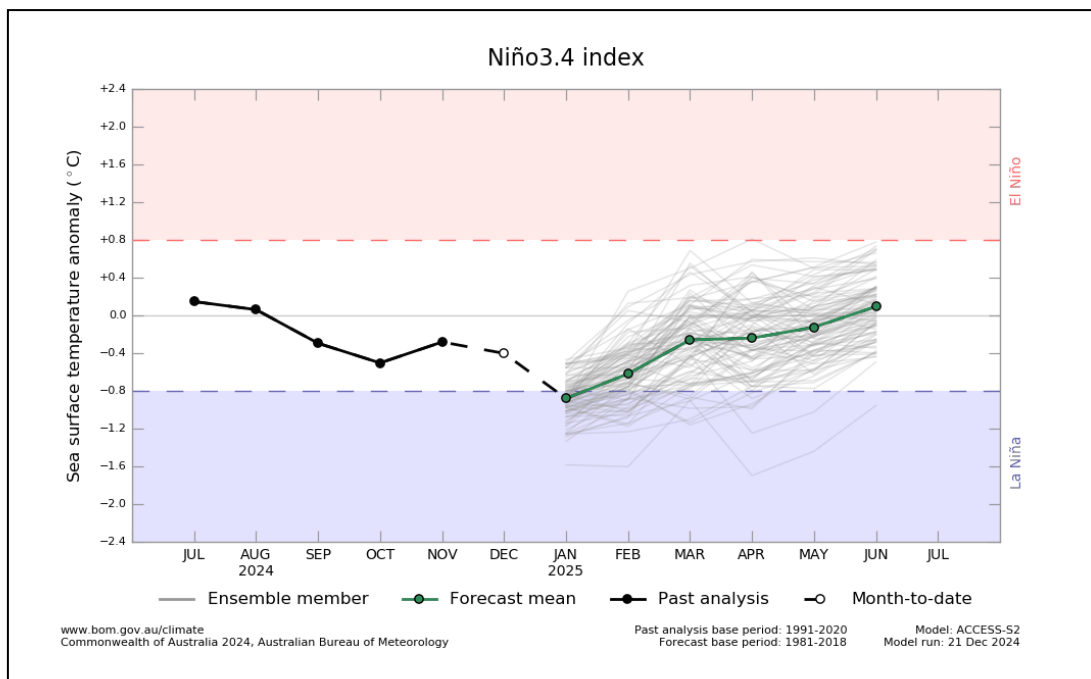


Figure 4a: IOD forecast from Australian Bureau of Meteorology